

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 071308.0446
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as express mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] or via EFS</p> <p><u>8/31/06</u></p> <p>on Signature <u>Alfonso Juarez</u></p> <p>Typed or printed name <u>Alfonso Juarez</u></p>		
<p>Application Number 10/616,018</p> <p>Filed 7/9/2003</p> <p>First Named Inventor Roland Albert et al.</p> <p>Art Unit 3682</p> <p>Examiner Kim, Chong Hwa</p>		
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p>		
<p>This request is being filed with a notice of appeal.</p>		
<p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p>		
<p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/06)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. <u>39,903</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p>		
<p><u>William Beard</u> Signature</p> <p>R. William Beard, Jr. Typed or printed name</p> <p>512.322.2690 Telephone number</p> <p><u>8/30/06</u> Date</p>		
<p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <p><input type="checkbox"/> *Total of _____ forms are submitted.</p>		

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ARGUMENTS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

The Examiner finally rejected claims 1-5 under 35 USC 103(a) as being unpatentable over U.S. 4,868,349 ("Chia ") in view of U.S. 5,504,378 ("Lindberg"). The Examiner also rejected claims 1-5, 7-12, 14-16, and 18-22 under 35 USC 103(a) as being unpatentable over U.S. 6,160,708 ("Loibl") in view of U.S. 4,868,349 ("Chia ") and in further view of U.S. 5,504,378 ("Lindberg"). Applicant respectfully disagrees. Furthermore, the Examiner rejected claims 1-5, 7-12, 14-16, and 18-22 under 35 USC 103(a) as being unpatentable over U.S. 5,940,271 ("Mertol") in view of U.S. 5,504,378 ("Lindberg") in view of U.S. 4,868,349 ("Chia ") in view of U.S. 5,966,291 ("Bäumel") and in further view of U.S. 6,160,708 ("Loibl"). Applicant respectfully disagrees. None of the cited references in any combination render the present invention obvious..

Independent claims 1 and 15 includes the limitation of

- a single piece body having an opening with a bottom wall having at least a partially flat area;
- at least one channel running through the plastic control plate for carrying a cooling medium, and
- a heat conduction metal body plate having a top surface and a bottom surface, said plate at least partially integrated in the plastic control plate arranged directly adjacent to the channel, wherein said heat conduction metal body plate top surface is flush with a top surface of the plastic plate and wherein said bottom surface rests at least partially on said bottom wall of said opening and wherein said at least one channel is formed by said heat conduction metal body plate and said integral body.

Chia does not disclose a device with a liquid cooling system. Therefore, a person skilled in the art would not consider Chia for an arrangement using liquid cooling. Even if a person skilled in the art would consider Chia, which Applicants do not concede, a combination of Chia with any prior art would not lead to the subject matter as claimed in independent Claims 1 and 15.

Chia teaches to use a metal plate (19) as a heat sink for an IC chip (20). See Chia, col. 2, line 57 to col. 3, line 33. Fig. 5 shows the completed arrangement of such a device. All elements of the device, such as pins 12, chips 20 and the heat sink 19 are encapsulated by a plastic material to form a single device.

Lindberg discloses a heat sink 102 including a plurality of fins that enhance heat transfer of a cooling fluid. See Lindberg, col. 5, line 44 to col. 6 line 12. The actual transistor dies 156a, b to be cooled are mounted on top of the heat sink 102. See Lindberg, col. 6, lines 34-43.

The Examiner stated that a combination of Chia and Lindberg leads to the structure as claimed in independent Claims 1 and 15. Applicant respectfully disagrees.

Chia discloses to embed the devices mounted on one side of a heat sink in plastic and expose the other side of the heat sink to the exterior whereby this exposed side is flush with the plastic of the housing. thus a combination of Lindberg and Chia would at best lead to a device in which the heat sink of Chia would be replaced by the heat sink of Lindberg. However, Lindberg teaches an entirely enclosed cavity within the heat sink for carrying the cooling fluid. Thus, no motivation or necessity exists to use parts of the housing of the Chia device to form a channel as required by the limitations of current independent Claims 1 and 15.

Independent Claim 7 also includes the limitation that a channel formed in the plastic housing is enclosed by the metal plate. Thus, similar as in independent Claims 1 and 15, the actual channel for carrying the cooling fluid is formed by the housing in combination with a metal plate. Hence, the same arguments as presented above apply for Claim 7.

With respect to all independent Claims 1, 7, and 15, Bäumel and Lindberg are the only references that disclose heat sinks cooled by a cooling fluid. However, Lindberg and Bäumel both disclose a heat sink made entirely of metal. See Lindberg col. 5, lines 60-62 and Bäumel col. 3, lines 12-27. In addition, Bäumel discloses a multiple element body including an aluminum half shell 22 a top frame (without reference number) and the heat sink plate 21 made from copper. Finally Bäumel does not disclose that the bottom surface of the metal plate 21 rests on the at least partially flat area of the single piece body.

None of the references alone or in combination discloses the specific limitations of the independent claims. Therefore, Applicant believes that all independent Claims are patentable in view of the prior art. Applicants respectfully submit that the dependent Claims are allowable at least to the extent of the independent Claim to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of the dependent Claims. Applicants reserve the right to make further arguments regarding the Examiner's rejections under 35 U.S.C. §103(a), if necessary, and do not concede that the Examiner's proposed combinations are proper.